





## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 8679

<b>SERIAL NUMBER</b> 09/926,568	<b>FILING DATE</b> 11/19/2001 <b>RULE</b>	<b>CLASS</b> 525	<b>GROUP ART UNIT</b> 1712	<b>ATTORNEY DOCKET NO.</b> 215850US0PCT
<b>APPLICANTS</b> Bernhard Mohr, Heidelberg, GERMANY; Dieter Boeckh, Limburgerhof, GERMANY; Oliver Borzyk, Speyer, GERMANY;				
<b>** CONTINUING DATA *****</b> THIS APPLICATION IS A 371 OF PCT/EP00/04293 05/12/2000 which is filed under 365(c) of 09/314,116 filed 05/19/1999				
<b>** FOREIGN APPLICATIONS *****</b>				
Foreign Priority claimed <input checked="" type="checkbox"/> yes <input type="checkbox"/> no 35 USC 119 (a-d) conditions met <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Not after Allowance		<b>STATE OR COUNTRY</b> GERMANY	<b>SHEETS DRAWING</b>	<b>TOTAL CLAIMS</b> 20
Verified and Acknowledged Examiner's Signature <i>[Signature]</i> Initials		<b>INDEPENDENT CLAIMS</b> 2		
<b>ADDRESS</b> 22850				
<b>TITLE</b> Polymers that contain alcoxyated, condensed alkaline amino acids and method of producing said polymers				
<b>FILING FEE RECEIVED</b> 890	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees ( Filing ) <input type="checkbox"/> 1.17 Fees ( Processing Ext. of time ) <input type="checkbox"/> 1.18 Fees ( Issue ) <input type="checkbox"/> Other <input type="checkbox"/> Credit	

Alkoxyated, condensed basic amino acid-containing polymers and their production

*This application is a 371 of PG/EP/04293 filed 05/12/2000 and is filed under 365(c) of 09/34,116 filed 05/19/1999*

5 Technical Field

The present invention relates to alkoxyated, condensed basic amino acid-containing polymers and a process for their production.

10

Background of the invention

Ethoxylated polyamines, especially polyethyleneimines and processes for their production are known, cf. U.S. Patent

15 3,313,736, U.S. Patent 4,891,160, U.S. Patent 4,551,506 and WO-A-97/23546. The ethoxylated polyamines are for example used in cleaning compositions.

DE-A-2 227 546 relates to the use of alkoxyated

20 polyalkyleneimines for the dehydration of crude oils. The alkoxyated polyalkyleneimines are prepared by a two-stage process in which, in the first stage, one mole of an alkylene oxide, based on one mole of NH groups in the polyethyleneimine, is reacted with a polyalkylenepolyamine in the presence of water

25 with formation of hydroxyalkyl groups. In the second process stage water is initially removed from the reaction mixture, an alkaline catalyst added, alkylene oxide forced in and the reaction carried out under pressure at temperatures between 125° and 135°C. From 10 to 300 alkylene oxide units are added per NH

30 group. Alternatively, the alkoxylation can be carried out in a single stage, by forcing in alkylene oxide in the presence of aqueous or anhydrous alkaline catalysts and causing it to react under pressure with polyethyleneimines at temperatures between 125 and 135°C.

35

EP-A-0,112,593 relates to detergent formulations containing ethoxylated amines. In this case the preparation of the alkoxyated amines likewise takes place in two stages, a hydroxyethylated polyethyleneimine being produced in the first

40 stage by the action of ethylene oxide and the necessary amount of ethylene oxide being added in the second stage by further addition of ethylene oxide at temperatures ranging from 130 to 140°C under super-atmospheric pressure. The degree of ethoxylation is for example from 15 to 42.

45

0050/49993

4/27/04